A version of the above amended paragraphs marked to indicate the specific amendments may be found in the attached Appendix, in accordance with 37 CFR 1.121(b)(1).

In the Claims:

Please amend claims 1, 3-6, 9, 14, 15 and 17-22 to read as follows:

A3

1. (Amended) A process for fabrication of a semiconductor device including an ONO structure, comprising forming the ONO structure by:

providing a semiconductor substrate having a silicon surface;

forming a first oxide layer on the silicon surface;

depositing a silicon nitride layer on the first oxide layer; and

forming a top oxide layer on the silicon nitride layer,

wherein the first oxide layer is formed by an in-situ steam generation oxidation of the silicon surface and the top oxide layer is formed by an in-situ steam generation oxidation of a surface of the silicon nitride layer.

3. (Amended) The process of claim 1, wherein the semiconductor device is a two-bit EEPROM device in which the first oxide layer is a tunnel oxide layer.

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4. (Amended) The process of claim 1, wherein the semiconductor device is a floating gate EEPROM device in which the first oxide layer is a bottom oxide layer.

5. (Amended) The process of claim 1, wherein the steps of forming a first oxide layer and forming a top oxide layer are carried out in an RTP apparatus.

6. (Amended) The process of claim 1, wherein the steps of forming a first oxide layer, depositing a silicon nitride layer and forming a top oxide layer are carried out in a single-wafer cluster tool.

A5

9. (Amended) The process of claim 1, wherein each step of in-situ steam generation oxidation is carried out at a temperature in the range from about 850°C to about 1150°C.

14. (Amended) A process for fabrication of a semiconductor device, the device including a two-bit EEPROM device including an ONO structure, comprising forming the ONO structure by:

providing a semiconductor substrate having a silicon surface;

A6

forming a tunnel oxide layer overlying the silicon surface by in-situ steam generation oxidation of a portion of the silicon surface;

depositing a silicon nitride layer overlying the tunnel oxide layer; and

forming a top oxide layer overlying the silicon nitride layer by in-situ steam generation oxidation of a portion of the silicon nitride layer.

15. (Amended) The process of claim 14, wherein the steps of forming a tunnel oxide layer and forming a top oxide layer are carried out in an RTP apparatus which is a component of a single-wafer cluster tool.

17. (Amended) The process of claim 14, wherein each step of in-situ steam generation oxidation is carried out at a temperature in the range from about 850°C to about 1150°C and by providing hydrogen gas and oxygen gas to the RTP apparatus.

A7

18. (Amended) A process for fabrication of a semiconductor device, the device including a floating gate FLASH structure comprising an ONO structure, comprising forming the ONO structure by:

providing a semiconductor substrate having a floating gate electrode;

forming a bottom oxide layer overlying the floating gate electrode by in-situ steam generation oxidation of a portion of a surface of the floating gate electrode;

depositing a silicon nitride layer overlying the tunnel oxide layer; and

forming a top oxide layer overlying the silicon nitride layer by in-situ steam generation oxidation of a portion of the silicon nitride layer.

19. (Amended) The process of claim 18, wherein the steps of forming a bottom oxide layer, depositing a silicon nitride layer and forming a top oxide layer are carried out in an RTP apparatus which is a component of a single-wafer cluster tool.

20. (Amended) The process of claim 18, wherein the silicon nitride is deposited by RTCVD.

21. (Amended) The process of claim 18, wherein each step of in-situ steam generation oxidation is carried out at a temperature in the range from about 850°C to about 1150°C and by providing hydrogen gas and oxygen gas to the RTP apparatus.

A version of the above amended claims marked to indicate the specific amendments may be found in the attached Appendix, in accordance with 37 CFR 1.121(c)(1).

REMARKS

Claims 1-21 are pending in the application. Although the Examiner has withdrawn consideration of the non-elected species, Applicants submit that since the generic claim 1 is now allowable, that claims 2-4, 14-16 and 18-21 be brought back into consideration in the present application. Claims 1, 3-6, 9, 14, 15, and 17-22 have been amended herein. Claims 1, 14 and 18 have been amended to incorporate the feature that the first oxide layer is formed by in-situ steam generation oxidation of the silicon substrate, which is supported, for example, in the claims as originally filed, i.e., claims 3 and 4. Claims 3 and 4 have been amended to depend from claim 1 and to remove the feature added to claim 1. Claim 5 has been amended to specify that the steps of forming a first oxide layer and a top oxide layer are both carried out in an RTP apparatus.